



Planer Kryo 750 – 30



Flexible cryogenic system designed for freezing of Bone Marrow, Stem Cells, Pharmaceutical Cell Lines, Skin, Cord Blood and other critical samples in high volumes.

The Kryo 750 - 30 is a unique integrated freezing system for the cryopreservation of large volumed samples or samples in large numbers.

The easy access front opening door is closed via a 3 point closure system, ensuring a leak free seal which helps to prevent the door freezing closed at low temperatures; additional protection is provided by heated door seals.

The freezer's 'on board' control system is operated with a unique two button process. This ensures that the user cannot accidentally run the wrong protocol, enabling rapid user training and absolute process verification.

Optionally the system may be operated via Planer's PC application, DeltaTTM - this offers multiple protocols and data viewing on-line, as well as data capture and storage for validation. The software is multi-level password protected to ensure only authorized users carry out procedures. User calibration to external standards is featured.

The large easy access chamber offers great flexibility and high capacity to ensure the most demanding laboratory requirements can be met.

Protocols can be based on 'sample temperature event' triggering, which combined with the fast cooling rates and forced laminar flow of the system, ensures high efficiency cooling at the fusion temperature. This enables efficient latent heat removal, creating optimum sample viability post thaw.

PRODUCT SPECIFICATIONS

Chamber volume	29 litres
Capacity	20 x 250/500ml blood bags, horizontally/vertically in chamber, or 40 x 50ml blood bags, horizontally/vertically in chamber
Ampoule capacity	1452 x 2ml
Straw capacity	1216 x 2ml
Lower temperature limit	-160°C
Cooling rates	-0.1 to -50°C/Min
Controlled heating rates	0.1 to 10°C/Min
System controller	Integral
System Pump	Cylinder
System Dewar	N/A
PC Software	Delta T™

- Designed for freezing of samples in bags, ampoules and straws
- Unique 2 button operation
- Standard PC software enables password protected multiple protocols
- Protocol stage "trigger on sample", or chamber temperature, or time
- Unique forced laminar flow cooling system ensures most efficient, even cooling
- Top, or Front opening for easy loading
- Heated door seal prevents freezing shut at cryogenic temperatures
- Inner chamber removable for sterilisation

Standard operating features

1. Start above ambient
2. Controlled heating
3. Comms port for PC connection
4. Fast cooling rates

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Dimensions		
Front Loading	External	Internal
Height	55 cm	26 cm
Width	79 cm	46.5 cm
Depth	48 cm	25 cm
Top Loading		
Height	48 cm	25 cm
Width	79 cm	44.5 cm
Depth	55 cm	26 cm
Weight	45 kg (shipping weight inc. packaging) approx.	
Capacity		
2ml ampoules	1452	
0.5ml straws	1216 horizontal or vertical	
0.25ml straws	1216 horizontal or vertical	
50ml blood bags	40 (dependent on manufacturer)	
250ml blood bags	20 (dependent on manufacturer)	
500ml blood bags	20 (dependent on manufacturer)	
Circulation	Horizontal laminar flow	
Temperature range	+100°C to -160°C	
Cooling medium	Liquid nitrogen 22 ±2 psi	
Heater	1000W	
Sensors: Control and sample	4-wire Platinum resistance thermometer. Sensors are linearised in software to international standards that utilise a 4096-point lookup table based on BS1904:1984 Table 1. Calibration facility provided.	
Accuracy	±0.5°C at a hold at 0°C (dynamic accuracy depends on actual programme, e.g. rate of change of temperature)	
Heating rates	0.01°C/min to 10°C/min	
Cooling rates	-0.01°C/min to -50°C/min (-0.01°C/min to -10°C below -80°C)	
Programmable cooling rate range	-0.01°C/min to -99.9°C/min	
Operating positions	Vertical or horizontal	
Thermal cutout	120°C cutout	
Power requirements	103-126VAC 50/60Hz 1200VA (max.) (470VA freezing only, with seal and bearing heaters operating). The freezer may be damaged by voltage surges in excess of 15% above nominal	
Chart sensitivity	16.7mV/°C. Nominal impedance > 10K	
Recorder	Scaling: 0V = -200°C, +5V = +100°C	
Standards	Designed to comply with BSEN 61010, CSA22.2No.125-M1984, CSA22.2No.151-M1986, EN50082-2, EN50081-2	
Storage temperature	-10°C to +70°C	
Storage humidity	Up to 95% non-condensing	
Operating temperature	5°C to 40°C	
Operating humidity	Less than 90	